

REMARKS

Claims 4, 6-13 and 24-34 are all the claims pending in the application. Claims 4, 7, 8, 10-13 and 30-34 are rejected and claims 6, 9 and 24-29 are objected to.

In the Amendment, claims 4, 7, 10, 12-13, 25-26 and 30-34 are amended. The specification and the Abstract are also amended. The amendments replacing "Group VIII elements", "Group IX elements", and "Group X elements" with "Group 8 elements" "Group 9 elements", and "Group 10 elements", respectively, according to Nomenclature of Inorganic Chemistry, Revised Edition, 1989, International Union of Pure and Applied Chemistry, which referred to the Arabic numerals 8, 9 and 10, shown in that version of the periodic table. A copy of the periodic table from the 1990 edition of the reference is attached hereto. The amendments correct an obvious error readily recognized as such by those of ordinary skill in the art. Other amendments are to correct minor typographical errors or to clarify the claimed invention as discussed herein. Hence no issues of new matter are presented.

I. Response to Claim Rejections Under 35 U.S.C. § 112, 1st paragraph

Claims 8, 10, 11, 30, 31 and 33 are rejected under 35 U.S.C. § 112, 1st paragraph, as not being enabled by the specification for a hydrogenation process using catalysts other than ruthenium, nickel, palladium and rhodium. The Examiner states that the specification does not enable one of ordinary skill in the art to make or use the claimed invention commensurate in scope with the claims in view of the *In re Wands* factors.

Specifically, the Examiner asserts that claims 10 and 30 are unduly broad based upon the interpretation that the claims read on any possible hydrogenation catalyst.

In addition, the Examiner states that claims 8, 31 and 33 recite that the catalyst is one that comprises at least one of the following metallic elements from Groups VIII, IX and X of the periodic table and that claim 11 recites a catalyst consisting of compounds of Groups VIII, IX, and X of the periodic table. The Examiner asserts that the claims read on any compound containing at least one of the elements of the specified groups, which means that there is a large number of possible catalysts. Further, the Examiner asserts that the specific preparation procedures for most of the possible catalyst are not disclosed. The Examiner also requests clarification as to whether "Group VIII" specifically refers to the elements of "Group VIIIB".

With regard to the status of the prior art, the Examiner states that it is well established in the art that catalysts have a unique, specific and non-predictable behavior, and therefore similar catalysts are not considered to behave similarly and that a process that is carried out with a given catalyst may not necessarily work with a similar catalyst. The Examiner states that in cases where a catalyst is required or is essential, the proper characterization of the catalyst is required.

It is the Examiner's position that each of the claimed processes requires an essential catalyst and that one of ordinary skill in the art would have to figure out how to prepare each catalyst and determine the specific conditions required to perform the claimed methods, which would require undue experimentation for catalysts other than ruthenium, nickel, palladium and rhodium.

Applicants respectfully submit that: (1) claims 10 and 30 are amended herein to recite a hydrogenating catalyst selected from the group consisting of Group 8 elements, Group 9 elements and Group 10 elements according to Nomenclature of Inorganic Chemistry, Revised

Edition, 1989, International Union of Pure and Applied Chemistry; (2) claims 8 and 11 are canceled; and (3) claim 12 is amended to depend from claim 10.

Applicants submit that the hydrogenating catalysts are described as metal catalysts throughout the specification and it is disclosed that it was known at the time of the invention that metals selected from Group 8 elements, Group 9 elements, and Group 10 elements are effective as hydrogenating catalysts used for the hydrogenation of an unsaturated group-containing ester. In addition, specific catalyst and properties of the hydrogenating catalyst suitable for the claimed invention are described on page 20, beginning at line 25 through page 25, line 30. Further, the examples include, palladium, rhodium, ruthenium and nickel catalysts.

In view of the above, the specification is sufficiently enabling to one of ordinary skill in the art for the entire scope of the claims in view of the nature of the invention, state of the art, and the guidance and working examples provided, such that one of ordinary skill in the art would be able to extrapolate from the known information to the present invention. Thus, it would not require undue experimentation for one of ordinary skill in the art to practice the claimed invention as limited to hydrogenating catalysts selected from the group consisting of Group 8 elements, Group 9 elements and Group 10 elements as presently recited.

With respect to the Examiner's request for clarification as to whether "Group VIII" specifically refers to the elements of "Group VIIIB" as shown in the periodic table attached to the Office Action, Applicants submit that it is disclosed in the original specification that Groups VIII, IX, and X are named according to Nomenclature of Inorganic Chemistry, Revised Edition, 1989, International Union of Pure and Applied Chemistry which correspond to Group 8, Group

9and Group 10 elements (in Arabic numerals) shown in the IUPAC Periodic Table of Elements from the Nomenclature of Inorganic Chemistry. Therefore the specification, claims and abstract are amended accordingly to correct this obvious error, which would be recognized as such by those of ordinary skill in the art.

Accordingly, Applicants respectfully request withdrawal of the rejection.

II. Response to Claim Rejections Under 35 U.S.C. § 112, 2nd paragraph

Claims 4, 7, 8, 10, 11, 30, 31, 32 and 33 are rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite for the following reasons:

(1) Regarding claims 4, 7, 10, 30 and 31 the Examiner states that the adjective “general” is considered to be indefinite because it is used to describe a formula which is limited to a specific number of compounds and not a “general formula”, which would embrace a number of possibilities. The Examiner suggest deleting the word “general”.

The word “general” is deleted in the claims, thereby rendering the rejection moot. Accordingly, Applicants respectfully request withdrawal of the rejection.

(2) In claims 10 and 30, the term hydrogenating catalyst is said to be indefinite because it embraces multiple alternatives and the Examiner requests Applicants to identify the specific required catalyst.

Claims 10 and 30 are amended herein to clarify the claimed invention and as discussed above with respect to the rejection under 35 U.S.C. § 112, 1st paragraph, thus obviating the rejection. Accordingly, Applicants respectfully request withdrawal of the rejection.

(3) In claims 10 and 30, the Examiner asserts that the definitions of the variables R^1 to R^5 denotes a list of different alternatives which are mutually exclusive and the Examiner states that R^1 cannot be all of the possible alkyl groups having 1-10 carbons simultaneously, or an alkenyl group having 2 to 10 carbons, etc. The Examiner suggests amending the claims to recite “wherein $R^1 \dots R^5$ are selected from the group consisting of an arbitrary alkyl group containing 1 to 10 carbon atoms, an arbitrary alkenyl”

Applicants respectfully traverse the rejection and submit that the claim language is definite and that one of ordinary skill in the art would be able to determine its meaning and scope. Specifically, claims 10 and 30 recite that the variables “denote an arbitrary alkyl group containing 1-10 carbon atoms, an arbitrary alkenyl group containing 2-10 carbon atoms, or a hydrogen atom”, which does not indicate or suggest that the variables can be all of the possible groups simultaneously. Further, it is acceptable to use “or” as in claims 10 and 30 to denote alternatives in a claim. See MPEP § 2173.05(II), citing *In re Gaubert*, 524 F.2d 1222, 187 USPQ 664 (CCPA 1975).

Accordingly, Applicants respectfully request withdrawal of the rejection.

(4) In claim 8, the phrase, “wherein the hydrogenating catalyst comprises at least one element selected from the group consisting of Group VIII elements, Group IX elements and Group X elements” is alleged to be indefinite because there are multiple alternatives embraced by the definition and because Groups IX and X are not found in the periodic table. See the periodic table attached to the Office Action. The Examiner presumes that the elements of Group VIIB are intended.

Claim 8 is canceled herein and therefore the rejection is rendered moot. Accordingly, Applicants respectfully request withdrawal of the rejection. Applicants have previously addressed the issue as to the elements intended.

(5) In claim 11, the phrase “wherein the hydrogenating catalyst comprises at least one species selected from the group consisting of compounds of Group VIII elements, Group IX elements and Group X elements” is alleged to be indefinite because there are multiple alternatives embraced in the definition. The Examiner also indicates that it is not clear whether Applicants intend elements or compounds comprising elements of the specified groups of the periodic table. The Examiner states that if a catalyst which is an organo metallic compound is intended, then Applicants should cancel the word “species” and present alternative compounds identifying the specific metals in order to properly identify the required catalyst.

Claim 11 is canceled and therefore the rejection is rendered moot. Accordingly, Applicants respectfully request withdrawal of the rejection.

(6) In claims 31 and 33, the phrase “hydrogenating catalyst which contains at least one metal selected from the group consisting of Group VIII elements, Group IX elements, and Group X elements is alleged to be indefinite because there are multiple alternatives embraced by the definition. The Examiner requests Applicants to identify the required catalyst.

Claims 31 and 33 are amended herein to recite “wherein the hydrogenating catalyst is a compound comprising at least one element selected from the group consisting of Group 8 elements, Group 9 elements, and Group 10 elements” for consistency with the other claims. As to the Examiner’s reason for rejecting the claims, Applicants respectfully traverse the rejection

because the use of Markush language to claim alternative elements is not improper. *See* MPEP § 2173.05(h). While the claims may be broad, they are not indefinite. Accordingly, Applicants respectfully request withdrawal of the rejection.

(7) In claims 31 and 33 some variables that are present in the saturated ester are said to be different from the starting material, which is said to be confusing. The Examiner suggests maintaining the same definition in those variables wherein no chemical changes take place. The Examiner also states that the definitions of variables R^1 to R^5 and $[R^6 \text{ to } R^7]$ R^7 to R^{11} denote a list of different alternatives which are mutually exclusive, e.g., R^1 cannot be all of the possible alkyl groups having 1-10 carbons simultaneously, or an alkenyl group having 2 to 10 carbons, etc. The Examiner suggests amending the claims to recite “wherein $R^1 \dots R^5$ are selected from the group consisting of an arbitrary alkyl group containing 1 to 10 carbon atoms, an arbitrary alkenyl”

Applicants respectfully submit that since the variables R^1 to R^5 of formula (1) at the corresponding positions of R^7 to R^{11} of formula (2) have the same definition, the claim language is definite such that one of ordinary skill in the art would understand the scope and meaning of the claim when read in light of the specification. However, in an effort to facilitate and expedite examination the claims are amended by replacing each of R^7 , R^8 , R^9 , R^{10} and R^{11} of formula (2) with the corresponding variable of formula (1), i. e., R^1 , R^2 , R^3 , R^4 and R^5 , respectively.

Accordingly, Applicants respectfully request withdrawal of the rejection.

(8) In claims 13 and 33 the phrase “species of an unsaturated group-containing ester is considered to be indefinite allegedly because it is broader than the term “compound”. The Examiner suggests reciting “a compound selected from the group consisting of. . . .”

Claim 13 is amended herein by deleting the phrase “species of” and claim 33 is amended herein by deleting the phrase “of the species of an”, thereby obviating the rejection. Accordingly, Applicants respectfully request withdrawal of the rejection.

(9) In claims 11, 12, 32 and 3 (apparently 34), the use of the word “species” is considered to be indefinite allegedly because it is broader than the term “element”. The Examiner suggests replacing the word “species” with the word “element”.

Claim 11 is canceled herein and therefore the rejection as to claim 11 is moot.

In regard to claims 12 and 32, the word “species” is replaced with the word “element”.

With respect to claim 3, Applicants note that claim 3 does not recite the word species and therefore it appears as if the Examiner may have intended to refer to claim 34 and not claim 3. Claim 34 is amended in the same manner as claims 12 and 32, thereby obviating the rejection.

Accordingly, Applicants respectfully request withdrawal of the rejection.

III. Response to Claim Objections

Claims 6 and 9 are objected to as being dependent on rejected claim 30.

Claims 24, 26 and 29 are objected to as being dependent on rejected claim 31.

Claims 25, 27 and 28 are objected to as being dependent on rejected claim 33.

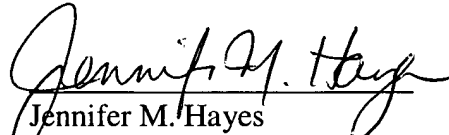
In view of the amendments and arguments made in response to the rejection of claims 30, 31, and 33, Applicants submit that dependent claims 6, 9, and 24-28 are allowable for the same reasons. Accordingly, Applicants respectfully request withdrawal of the objection.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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